Message

From: Harshfield - CDPHE, Gregory [gregory.harshfield@state.co.us]
Sent: 7/5/2017 9:28:43 PM
To: Payton, Richard [Payton.Richard@epa.gov]
CC: cindy.wike@state.co.us
Subject: Re: FW: High ozone yesterday (7/2) in Denver metro area (?)

Itemp at NREL was stable through the time period. There were no power outages recorded on the data logger and other diagnostic channels that are sensitive to electronic fluctuations were normal. Our meteorologists indicated no or very very low smoke in the area from wildfires. They also indicated that there was a thunderstorm in the area in the late afternoon and early evening. They speculated that maybe the thunder storm might have brought down some stratospheric ozone, but that was not very likely because there was also an elevated spike in ozone around 13:00 when there were no storms in the area. As you noted, NREL was elevated on the previous day and was noticeably higher than welch or RFN, however it was comparable our 2BTech foothill sites at the Mt Vernon Country Club and Centennial Cone sites. This gives credence to the validity of the NREL values on the 1st. We are scratching our heads on this one, maybe QA will find something tomorrow.

Greg

On Wed, Jul 5, 2017 at 12:39 PM, Payton, Richard <Payton.Richard@epa.gov> wrote:

> I thought maybe the AC went out? But, high value was about sunset. Interferent getting up to 156 would be pretty heavy; either a LOT of VOC, or maybe smoke equivalent to about 1,000 ug/m3 of PM2.5 (my rule of thumb is 100 ug/m3 of smoke PM2.5 causes about 5 ppb of false ozone.
>
> Jeffco Airport reported thunder at 1:37 pm; any chance of a lightning strike (not causing ozone, but scrambling the logger or the instrument?
>
> Does everything looks god on 7/1? NREL was about 10-15 ppb higher than Welch/Chatfield/Rocky Flats for about 12 hours straight.
>
> Richard
>
> **From:** Harshfield - CDPHE, Gregory [mailto:gregory.harshfield@state.co.us]
> **Sent:** Wednesday, July 05, 2017 11:02 AM
> **To:** Payton, Richard <Payton.Richard@epa.gov>; cindy.wike@state.co.us
> **Subject:** Re: FW: High ozone yesterday (7/2) in Denver metro area (?)
>
> Richard,

We do not believe the numbers but are having a hard time finding justification to invalidate them. QC the night before and after this episodes are okay. All diagnostic channels on the analyzer appear to be okay. Beyond their elevated values and not tracking the rest of the network the only other abnormality was an increased amount of noise in the minute data for the last two spikes on 7/2/17. Increased noise is typically an indication of lamp going bad, however, a lamp going bad typically does not cause a rise in signal response and hourly averages tend to be okay. We collocated a second analyzer at the site on July 3, but have yet to see any discrepancies. QA folks will audit the analyzer first thing tomorrow morning. My guess is the analyzer is fine and we picked up on some interferent. We are running a 2BTech analyzer at the Mt Vernon Country Club this summer which is approximately 6 miles to the west and did not see the anomalies. Mt Vernon typically reads the same or higher than NREL. Thoughts?

Greg

On Wed, Jul 5, 2017 at 7:51 AM, Payton, Richard <Payton.Richard@epa.gov> wrote:

Greg:

We got a question from Lew Weinstock at OAQPS about NREL O3 data on Sunday (156 ppb at 7:00 pm MST). The trace does not look like ozone to me. Any post-mortem on this data?

If you decide the data in AirNOW are invalid, I would ask you to correct/null out the AirNOW data. OAQPS does a weekly design value calculation for internal EPA status reports using all available data from AQS plus more recent data from AirNOW for data not yet in AQS. If Sunday (and Saturday?) turn our not to be valid, correcting the data in AirNOW would correct those weekly internal EPA reports.

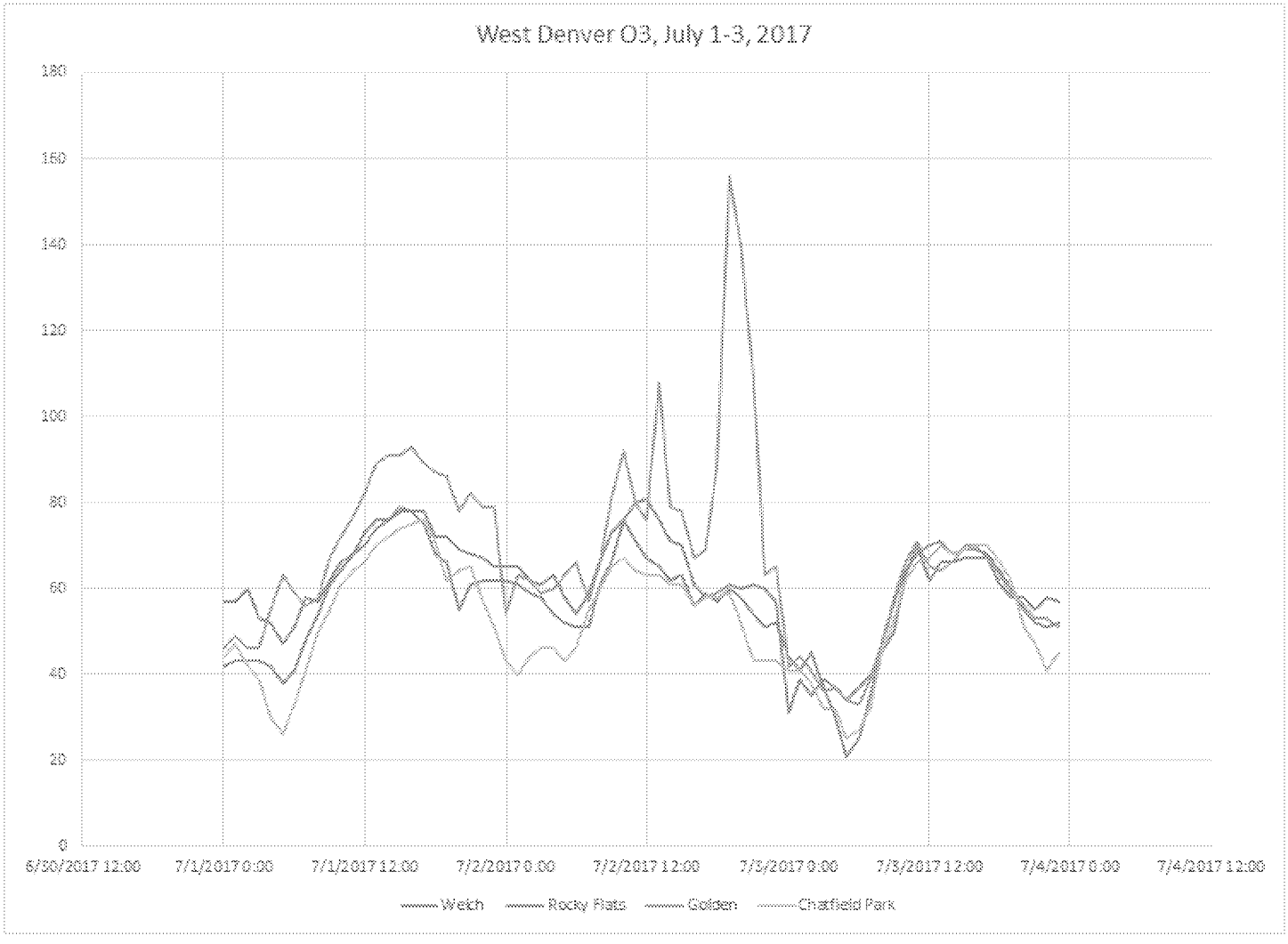
Thanks.

Richard

From: Payton, Richard
Sent: Wednesday, July 05, 2017 7:22 AM

To: Weinstock, Lewis <Weinstock.Lewis@epa.gov>; Brown, Ethan <Brown.Ethan@epa.gov>
Cc: Rickard, Joshua <Rickard.Joshua@epa.gov>; Jackson, Scott <jackson.scott@epa.gov>; Tonnesen, Gail <Tonnesen.Gail@epa.gov>
Subject: RE: High ozone yesterday (7/2) in Denver metro area (?)

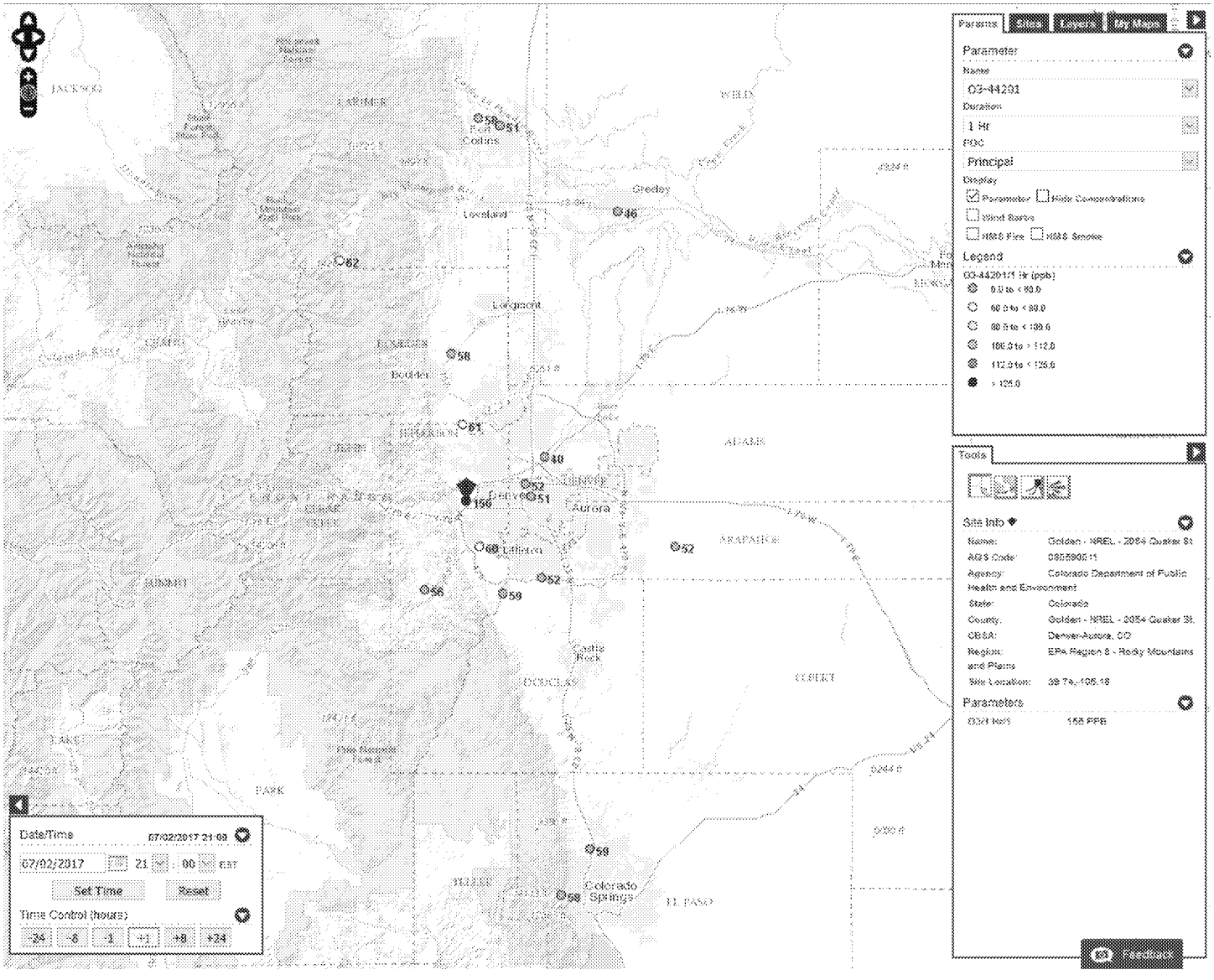
It does not look real to me, 1st peak of 92 at 11:00 am MDT, 156 at 8:00 pm MST; CDPHE has not corrected it on their web page, but their entire network drops out at 3:00 pm MDT, so they were definitely having issues. I will check with Colorado. 8-hour average at the same site was 88 ppb on Saturday; don't know whether to trust that, either.



From: Weinstock, Lewis
Sent: Monday, July 03, 2017 12:08 PM
To: Payton, Richard <Payton.Richard@epa.gov>; Brown, Ethan <Brown.Ethan@epa.gov>
Cc: Rickard, Joshua <Rickard.Joshua@epa.gov>
Subject: High ozone yesterday (7/2) in Denver metro area (?)

Hi Guys:

Is this real? Also a 140 ppb hour on the same day. Heck of a gradient.



Lewis Weinstock | Group Leader | Ambient Air Monitoring Group | Air Quality Assessment Division - Mail Code C304-06 | Office of Air Quality Planning & Standards | U.S. Environmental Protection Agency | Research Triangle Park, NC 27711 | Phone: 919-541-3661|

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Technical Services Program

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